

117TH CONGRESS
1ST SESSION

S. 1624

To direct the Secretary of Energy to establish a National Laboratory Biotechnology Program to address biotechnology threats, and for other purposes.

IN THE SENATE OF THE UNITED STATES

MAY 13, 2021

Mr. LUJÁN introduced the following bill; which was read twice and referred to the Committee on Energy and Natural Resources

A BILL

To direct the Secretary of Energy to establish a National Laboratory Biotechnology Program to address biotechnology threats, and for other purposes.

1 *Be it enacted by the Senate and House of Representa-
2 tives of the United States of America in Congress assembled,*

3 SECTION 1. SHORT TITLE.

4 This Act may be cited as the “National Laboratory
5 Biotechnology Research Act of 2021”.

6 SEC. 2. DEFINITIONS.

7 In this Act:

8 (1) DEPARTMENT.—The term “Department”
9 means the Department of Energy.

1 (2) NATIONAL LABORATORY.—The term “Na-
2 tional Laboratory” has the meaning given the term
3 in section 2 of the Energy Policy Act of 2005 (42
4 U.S.C. 15801).

5 (3) NNSA.—The term “NNSA” means the Na-
6 tional Nuclear Security Administration.

7 (4) OFFICE.—The term “Office” means the
8 joint program office established under section 3(b).

9 (5) OFFICE OF INTELLIGENCE AND COUNTER-
10 INTELLIGENCE.—The term “Office of Intelligence
11 and Counterintelligence” means the Office of Intel-
12 ligence and Counterintelligence of the Department.

13 (6) OFFICE OF SCIENCE.—The term “Office of
14 Science” means the Office of Science of the Depart-
15 ment.

16 (7) PROGRAM.—The term “Program” means
17 the National Laboratory Biotechnology Program es-
18 tablished under section 3(a).

19 (8) SECRETARY.—The term “Secretary” means
20 the Secretary of Energy.

21 **SEC. 3. NATIONAL LABORATORY BIOTECHNOLOGY PRO-**
22 **GRAM.**

23 (a) IN GENERAL.—The Secretary shall establish a
24 National Laboratory Biotechnology Program to integrate
25 the resources of the Department, including the Office of

1 Science, the Office of Intelligence and Counterintelligence,
2 and the NNSA, to provide research, development, test and
3 evaluation, and response capabilities to respond to—

4 (1) long-term biotechnology threats facing the
5 United States; and

6 (2) any remaining threats posed by COVID–19.

7 (b) JOINT PROGRAM OFFICE.—To carry out the Pro-
8 gram, the Secretary shall establish a joint program office,
9 which shall comprise appropriate leadership from the Of-
10 fice of Science, the NNSA, and the National Laboratories.

11 (c) FUNCTIONS.—The Office shall—

12 (1) oversee the development and operation of
13 major research activities of the Program;

14 (2) periodically review and recommend updates
15 as necessary to Program policies and guidelines for
16 the development and operation of major research ac-
17 tivities;

18 (3) collaborate with the directors of research di-
19 rectorates of the Department, directors of National
20 Laboratories, and other senior Department officials,
21 as appropriate, to gain greater access to top re-
22 searchers and new and potentially transformative
23 ideas;

24 (4) enable access to broad scientific and tech-
25 nical expertise and resources that will lead to the de-

1 deployment of innovative products, including
2 through—

3 (A) research and development, including
4 proof of concept, technical development, and
5 compliance testing activities; and

6 (B) early-stage product development, in-
7 cluding through—

8 (i) computational modeling and sim-
9 ulation;

10 (ii) molecular structural determina-
11 tion;

12 (iii) genomic sequencing;

13 (iv) epidemiological and logistics sup-
14 port;

15 (v) knowledge discovery infrastructure
16 and scalable protected data;

17 (vi) advanced manufacturing to ad-
18 dress supply chain bottlenecks;

19 (vii) new capabilities for testing of
20 clinical and nonclinical samples;

21 (viii) understanding environmental
22 fate and transport of viruses; and

23 (ix) discovery of potential therapeutics
24 through computation and molecular struc-
25 ture determination;

1 (5) provide access to user facilities with ad-
2 vanced or unique equipment, services, materials, and
3 other resources to perform research and testing;

4 (6) support technology transfer and related ac-
5 tivities; and

6 (7) promote access and development across the
7 Federal Government and to United States industry,
8 including startup companies, of early applications of
9 the technologies, innovations, and expertise bene-
10 ficial to the public that are derived from Program
11 activities.

12 (d) BIODEFENSE EXPERTISE.—

13 (1) IN GENERAL.—In carrying out the Pro-
14 gram, the Office shall support research that har-
15 nesses the capabilities of the National Laboratories
16 to address advanced biological threats of national se-
17 curity significance through assessments and research
18 and development programs that—

19 (A) support the near- and long-term bio-
20 defense needs of the United States;

21 (B) support the national security commu-
22 nity in reducing uncertainty and risk;

23 (C) enable greater access to top research-
24 ers and new and potentially transformative
25 ideas for biodefense of human, animal, plant,

1 environment, and infrastructure assets (including
2 physical, cyber, and economic infrastructure); and
3

4 (D) enable access to broad scientific and
5 technical expertise and resources that will lead
6 to the development and deployment of innovative
7 biodefense assessments and solutions, including through—
8

9 (i) the accessing, monitoring, and
10 evaluation of biological threats to reduce
11 risk, including through analysis and
12 prioritization of gaps and vulnerabilities
13 across open-source and classified data;

14 (ii) development of scientific and technical roadmaps—
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16 (I) to address gaps and vulnerabilities;
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18 (II) to inform analyses of technologies; and
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20 (III) to accelerate the application
21 of unclassified research to classified
22 applications; and

23 (iii) demonstration activities to enable
24 deployment, including—

11 (2) RESOURCES.—The Secretary shall ensure
12 that the Office is provided and uses sufficient re-
13 sources to carry out paragraph (1).

14 (e) STRENGTHENING INSTITUTIONAL RESEARCH
15 AND PRIVATE PARTNERSHIPS.—

bating biotechnology threats, which shall be accessible for use by individuals from academic institutions and industry.

(A) conduct outreach about internship opportunities relating to activities under the Program primarily to institutions of higher education (as defined in section 101 of the Higher Education Act of 1965 (20 U.S.C. 1001)) and minority-serving institutions of higher education;

13 (B) encourage the development of research
14 collaborations between research-intensive uni-
15 versities and the institutions described in sub-
16 paragraph (A); and

17 (C) provide traineeships at the institutions
18 described in subparagraph (A) to graduate stu-
19 dents who pursue a masters or doctoral degree
20 in an academic field relevant to research ad-
21 vanced under the Program.

22 (f) EVALUATION AND PLAN.—

23 (1) IN GENERAL.—Not less frequently than bi-
24 ennially, the Secretary shall—

(A) evaluate the activities carried out under the Program; and

20 (g) INTERAGENCY COLLABORATION.—The Office
21 may collaborate with the Secretary of Homeland Security,
22 the Secretary of Health and Human Services, the Sec-
23 retary of Defense, and the heads of other appropriate Fed-
24 eral departments and agencies to advance biotechnology
25 research and development under the Program.

1 (h) AUTHORIZATION OF APPROPRIATIONS.—There
2 are authorized to be appropriated to the Secretary to carry
3 out this section, to remain available until expended—
4 (1) \$30,000,000 for fiscal year 2022;
5 (2) \$40,000,000 for fiscal year 2023;
6 (3) \$45,000,000 for fiscal year 2024; and
7 (4) \$50,000,000 for each of fiscal years 2025
8 and 2026.

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